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ABSTRACT

This paper focuses on both conceptual and methodological issues involved in the utilization of different need assessment strategies. Among the strategies discussed are: (1) key informant; (2) community forum; (3) service utilization; (4) social indicators; and (5) citizen survey. Each of these more commonly used need assessment strategies: (1) has an implicit theoretical orientation toward the definition of need; (2) utilizes different measuring tools; (3) varies in degree of reliability and validity of the obtained measures; (4) differs in the amount of technical expertise required to collect the data; and (5) varies as to the degree of interpretation necessary in order to plan and develop programs from the collected data. Comparison of the different methodological approaches allows for: (1) a better articulation of the efficacy of these approaches; (2) further refinement of the approaches; and (3) a clearer delineation of which single or multiple procedures are most appropriate for which questions, situations, and problems. Maximum fit needs to be obtained between the approach or approaches and the task. (Author)

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ISSUES IN NEED ASSESSMENT DATA COLLECTION STRATEGIES

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ISSUES IN NEED ASSESSMENT DATA COLLECTION STRATEGIES

INTRODUCTION

Over the past half decade, the words "need assessment" have appeared in the program planning and grant application processes in the majority of public and private agencies. These two words have arisen as a direct result of the increasing impersonality that characterizes much of our modern urban society. Bureaucracies at the local, state, and federal levels, in their desire to be responsive and accountable to human need, have devoted great amounts of funding to human service agencies. These agencies have frequently overlapped and competed with one another or with the private sector for available financial resources. The often inefficient delivery of services coupled with tightening finances has focused attention on the need for better coordination and integration of program efforts. Consequently, both federal and state legislations now require, in most cases, that need assessment activities be conducted before human service agencies be funded. In other words, programs that are being anticipated or encouraged must be tied directly to identified human service needs.

These requirements have been enacted, and, over the past four or five years, a rather large data base on particular need assessment strategies has been developed.

This has enabled us to talk in a much more empirical fashion about conceptual and methodological issues which are related to the need assessment process. This paper will present a brief discussion of issues in defining need and in choosing assessment strategies, as well as a brief overview of five types of assessment techniques along with their advantages and disadvantages.

ISSUES IN DEFINING NEED

The need assessment process has five basic components.

1. Constructing need models.
2. Translating need models into measurables.
3. Measuring procedures.
4. Identifying solutions
5. Implementing solutions

This assessment process usually begins with the establishment of some kind of steering committee which is generally composed of program administrators, clinical personnel, program evaluators, board members, as well as representatives from the community, who begin systematically attempting to answer the question, "What do we need to know?" Drawing on the wealth of experience of both professionals and laypeople, the committee eventually arrives at a mutually agreed upon understanding of need. They can then move onto the processes of translating this understanding into something measurable and of choosing the particular strategies to be used. Finally, the committee, using the results of the assessment strategies, is in a

position to choose solutions and to implement them.

It should be noted that, while the issues discussed below are described as separate entities, they are debated and dealt with in the arena of such a committee atmosphere.

While solution identification and solution implementation are extremely important to the entire assessment process, they will not be discussed here. This paper will first discuss issues related to constructing need models. It will then examine those issues involved in translating these models into measurables and how these issues relate to current assessment techniques.

Need assessment is a complicated feedback process, the steps of which are neither simple nor linear. The identification of need begins with the fundamental issue which countless researchers have attempted to wrestle with, namely, the definition of what need actually is.

Historically, need was often defined as a personal assessment such as a "felt difficulty." Present research in both the social and medical sciences leans more towards defining a need as a lack of something which is required for the survival and the well-being of the unit under study. That unit may be an individual human being, a group, or a community as a whole. However, both of these definitions are extremely hard to operationalize, and it is easy to become entangled in disagreements over the meanings of such abstractions as "felt," "difficulty," "survival,"

"well-being," and "required."

Much of the difficulty with need definition or identification stems from the fact that "need" is actually an abstraction and that the cognitive processes in defining the word often do not take specific situations into account.

For need assessment purposes, the research definition given above implies a standard (be it a statistical norm or theoretical concept) which represents the desired or optimal condition. A deviation from this standard is assumed to indicate the degree and nature of a unit's needs. For example, "deviate" attributes are those which are thought to digress from a generally accepted range of attributes which define normality. These attributes may refer to behavior, verbalization, thought processes, or physiological measures. As long as the attribute is measurable, it can be assessed in terms of how closely it fits concepts of normality. The concept of deviation from a statistical norm is very simple. Its application, however, is no easy matter since it is difficult to define the range of normality in unambiguous terms.

The concept of deviation from a <u>theoretical</u> norm or standard is even more difficult to put into practice. With the exception of basic biological requirements, there is no universal agreement about what an absolute necessity is or about what is desirable or optimal.

We suggest, however, that the process of need

identification must involve the integration of at least three different types of input:

1. The professional experience and training of the need assessor and the service providers for whom the assessment is being done. In addition, the philosophical, research, and service backgrounds of the members of the steering committee will affect their assumptions about what goals should be pursued, what means should be used, and how other types of input should be evaluated.

2. The cultural framework of the community. While this is also an abstract entity, it differs from the first in that it is not derived from a strictly philosophical or research-oriented tradition. It is often ill-defined until applied to a particular problem. For example, drunkenness may be defined as a problem only when it affects a large percentage of the population. On the other hand, incest may be defined as a problem regardless of how often it occurs. Interestingly, a decision has been made that both occurrence and frequency are necessary before drunkenness is problematic while sheer occurrence is all that is necessary to define incest as a problem.

3. Specific research data. This category includes results of assessment activities available to the steering committee from other communities or which were done previously in the community under consideration.

The need assessment process takes hypotheses, which are either inferred from specific data or derived from other theoretical orientations, and tests them against other data, other hypotheses, and bits of the cultural framework which may come to light in the need identification process. The resulting need model will be created from both empirical and theoretical inputs.

TRANSLATING INTO MEASURABLES

Once the steering committee has succeeded in creating a need model, it then begins the process of translating this model into something measurable. This translation is facilitated by examining the following questions:

1). What kind of data is dictated by the need model?

2). Are such data presently available? If so, where? If not, what kind of assessment techniques could obtain it?

3). What kinds of practical limitations--e.g., money and time--must the committee deal with?

In answering these questions and in choosing the appropriate assessment strategies, the committee must deal with three issues:

1. How can the most valid and accurate data be obtained?

2. What are the practical limitations?

3. How can community support for the need assessment be fostered?

NEED ASSESSMENT APPROACHES

The remaining sections of this paper are devoted to the issues related to five of the need assessment approaches. These approaches will be reviewed in terms of the validity of the data they provide, their practical limitations, and how they can contribute to successful solution identification and implementation.

KEY INFORMANT APPROACH

The key informant approach is based on information

secured from those in a community who, it is assumed, are in a good position to know what the community's needs and utilization patterns are. The criteria for selecting a key informant are most logically based on an individual's knowledge of the community, its people, their needs and patterns of services being received. The kinds of persons sought as key informants include public officials, administrative and program personnel of community health and welfare organizations, the clergy, and health care professionals from both public and private sectors. Information is gathered via interview schedules or questionnaires and may be supplemented by meetings in which the informants discuss the implications of the results.

The obvious advantages to the key informant approach are that it is simple and inexpensive to conduct. It simultaneously permits the inputs and interactions of a great many different individuals, each with his own perspective of the community's needs. If the information gathering technique is well-structured and the key informants are cooperative, a fairly reliable impression of the community and its needs can be obtained. In addition, this process enables lines of communication to be constructed among local human service agencies. As a consequence, a more concerted community-based approach regarding the establishment of priorities and allocation of resources may take place.

One disadvantage of the key informant method is that it depends on people who may define the human service needs of a community in terms of their own organization's perspectives. Thus a vested interest may prevent an informant from giving an honest open appraisal of what services are needed and which agencies should be responsible for delivering them. The domains and mandates of a community's health and welfare agencies frequently overlap, and there is often competition for limited resources. Such circumstances can lead to divisiveness and conflict and must be guarded against.

A second significant disadvantage of the key informant approach lies in the fact that the informants are not representative of the community's population in a statistical probability sense. Because of this, those who are not readily visible--the old, the socially or geographically isolated, the powerless poor--may go unnoticed. When this occurs, those whose needs may be greatest may not be recognized, and consequently, plans to meet those needs are not formulated.

COMMUNITY FORUM

The community forum approach taps a broader cross section of the community than the key informant approach does. The public is invited to meetings in which their opinions and feelings are solicited. Information is gathered through a list of questions designed by a steering

committee to stimulate discussions around specific topics.

Like the key informant approach, the advantages of this technique are that it is simple in design, it is inexpensive to conduct, and it provides a first step in community participation and cooperation with the need assessment process.

One major disadvantage lies in the validity of the results. Theoretically, a community forum can tap a more representative sample of the community's people than the key informant approach if the logistics of proper timing, placement and advertisement of the meetings are worked out. However, there is no guarantee that the citizens attending the meeting will be truly representative. Furthermore, the information gathered may reflect more of the assertiveness and verbal ability of particular citizens or interest groups than the opinions of the entire community.

Another disadvantage of the forum lies in the possibility that meetings may heighten expectations of community members which cannot be met since many factors associated with health and welfare programs and the delivery of care are beyond the control of individual local agencies. Accordingly, those in charge of the forum must make it clear, from the time of early publicity onward, that the sessions are designed primarily to obtain information which can be used by the agency for assessment planning.

A third and significant disadvantage is that the

community forum, like the key informant technique, provides data which is largely impressionistic. While this information can be extremely interesting, particularly for agencies planning to do more comprehensive programs, it is not easily amenable to systematic analysis. Nor is there any guarantee that this information is accurate or representative of all groups in a community or that all of it can be used by the assessment planners.

SERVICE UTILIZATION

The service utilization approach draws its information from the records of community health and welfare agencies. Analysis of such data provides a descriptive ennumeration of persons who have been consumers or clients of these agencies' services. The underlying assumption of a service utilization approach is that relatively accurate estimates about community needs can be based on a sample of persons who have received care or treatment, especially if the eligibility criteria for care or treatment have been standardized by universally accepted providers.

There are three major advantages of this approach. First, and most important, these data represent treated cases corroborated by professional caretakers or service providers and consequently provide valuable information from which estimates of need can be made. A second advantage is the availability of the data and the relatively low cost of securing and analyzing it. A third benefit is that a

service utilization study tends to increase communications between various human service agencies or providers in the community. Improvement in interagency communication often elevates the general level of sensitivity to community needs and facilitates a greater integration among service agencies.

The overwhelming weakness of using service utilization data in need assessment lies in the assumption that community needs are accurately represented by admissions to existing health and human service facilities. This assumption may not be valid for two important reasons. First, the translation of needs into demand for and utilizaton of services depends on the extent to which services are available, accessible, and acceptable to clients and on the extent to which potential clients are aware of services that may satisfy their needs. Service availability, acceptability, and accessibility and public awareness of such service are, in turn, influenced by organizational attitudes and economic factors. Second, service utilization data may not be comparable across agencies that provide the same types of services. For example, different agencies may have different definitions of what is a "case." Admissions rates may be misleading because of duplicated counts resulting from a single individual having multiple admissions during a given period to a single institution and its service components. The

organizatonal structure of a health and human service facility may be defined differently from one geographical area to another.

In summary, the consistency, validity, and comparability of service utilization data depend largely on the adequacy and similarity of clinical and management information systems within community agencies. This fact, together with the difficulty of accurately inferring needs from utilization data, points to the necessity to complement this assessment technique with other approaches.

THE SOCIAL INDICATORS APPROACH

The social indicators approach is based primarily on inferences of need drawn from generally descriptive social and demographic statistics found in public records and reports. The underlying assumption of this approach is that estimates of needs and the social well-being of the community can be made by examining selected social and demographic descriptors that have been found to correlate highly with service utilization. In other words, some social indicators are accepted inferentially as empirical predictors of need. The use of social indicators to assess the relative distribution of service needs in a community stems from two important investigatory traditions: epidemiological research and social area analysis.

There are five major advantages in using the social indicators technique. First, indicators can be developed

from a vast data pool which already exists and is easily available. Second, this approach is relatively inexpensive and can be conducted by persons with limited amounts of research training or technical expertise. The third advantage is design flexibility. A social indicators approach can use a few sociodemographic factors and produce a simple description of the community under study or it can take a large number of indicator variables and show how they interrelate using sophisticated statistical techniques. Fourth, the results of a well-executed social indicators analysis can serve as a foundation upon which to build or up-date other need assessment approaches with a minimum of effort and cost. And fifth, because some social indicator data are collected uniformly across the United States, it becomes possible to use these data to compare communities or to control for demographic differences when comparing health and human service agencies.

The disadvantages of the social indicators approach are both theoretical and methodological. The first and most serious drawback is that many social indicators are only indirect measures of needs which they are supposed to represent. Consequently, there is good reason to question the validity of using them to assess needs. For example, divorce, separation and illegitimacy rates are often used as indices of family stability and security. However, divorce, separation and illegitimacy do not represent family

instability to all groups in our society. Thus, it can be argued that these indices should not be used universally to evaluate the ability of persons related to one another by law or family descent to perform the necessary instrumental and affiliate functions that make family life stable and secure. Second, the social indicators approach has been criticised for its tendency toward ecological determinism--that is, viewing the demographic characteristics of a geo-political unit as causing its observed or inferred social condition. For example, while the spatial arrangements of an area obviously influence and limit its social conditions and relationships, these arrangements do not totally determine or, in an absolute sense, cause such conditions. Third, there is a danger of overgeneralizing the findings of social indicator analysis. Residents of an area are often imputed to have characteristics which correlate with the average or modal descriptives of that area. This, however, is methodologically incorrect since the modal statistics give no indication of the range of such characteristics. Generalizations based on summary statistics do, however, become less amenable to this criticism when analyses are done on populations which are relatively homogeneous.

In summary, these theoretical and methodological issues should not dissuade the use of social indicators in assessing health and service needs. Estimated needs which

are derived from a cautious use of social indicator analysis can be useful when such inferences are combined with information obtained from other assessment techniques.

THE CITIZEN SURVEY APPROACH

A citizen survey is the systematic information process in which data are collected directly from a sample or the entire population of persons living in a community. As applied to need assessment, a citizen survey usually consists of a structured interview schedule or questionnaire that is designed to elicit information from respondents about their health, social well-being and the patterns of care of services currently received or previously consumed*.

Only three of the many advantages of the citizen's survey approach to need assessment will be discussed here. First, and most important, surveys that are carefully designed and conducted provide the most direct scientifically valid and reliable information of all the need and utilization patterns of individuals and families. Of the assessment techniques, the citizen survey alone is capable of soliciting specific information from individuals about their own needs and utilization of services and the

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* Since the citizen survey is rather complicated, we refer interested listeners to Warheit, Bell, and Schwab's Planning for Change, Need Assessment Approaches or to a chapter entitled "Service Utilization, Social Indicators, and Citizens Survey Approaches to Human Service Need Assessment" in a forthcoming book entitled Evaluation of Human Service Programs edited by Atkinson, Hargraves, Horowitz and Sorensen.

needs and utilization patterns of their family.

The second important advantage of the survey is that survey information greatly expands the utility of other need assessment approaches. In a real sense, the citizen survey has the capacity to corroborate and integrate the findings of all other need assessment approaches. It can thus be instrumental in devising a meaningful and useful system of researching needs both among service utilizers and among residents who have not contacted existing health and human service programs in the community.

A third important advantage of the citizen survey is its flexibility. Surveys can be designed in an extremely wide variety of ways to answer questions related to needs for services. This design flexibility permits a choice of sampling techniques, item and instrument construction, specificity of inquiry, and also permits a multiplicity of data analysis procedures. The extent of this flexibility is often lacking in the other assessment techniques.

Although citizen surveys are often used, they pose a number of problems, some of which are difficult to overcome, some of which are not. First, as with all need assessment approaches, the validity of survey data is the basic problem. Many in the mental health field have argued that prevalence rates documented through surveys have little value as guides to planning because the basic problems related to psychiatric diagnostic nomenclature and to

defining the criteria for identifying and recognizing various kinds of impairment have not been solved. However, citizen surveys that incorporate up-to-date knowledge about human problems, illness, and social functioning can provide reliable information about: a) the distribution of physical and mental symptomotology; b) the levels of physical, psychological, and social functioning; and c) the attitudes towards and utilization of service agencies and the general quality of life in a community. Such information is useful and important for estimating levels of need for services in the community. Second, it is often difficult to ascertain the validity and reliability of the responses of survey questions relating to an individual's health needs and practice. This difficulty, however, is not unique to surveys. The responses to individuals must be considered with caution whenever they report information about themselves or others. Third, surveys--particularly very large ones--that are designed to measure prevalence or incidence are much more difficult to define, conceptualize and operationalize than any of the other need assessment approaches outlined in this paper. However, surveys need not always be large and complex or expensive, especially if they are used in conjunction with other assessment techniques.

A further disadvantage is that the community may not cooperate with or support the citizen survey. This problem

can be handled, however, if the steering committee, in planning the survey, takes great pains to enlist the cooperation and participation of community organizations and agencies. Such an approach can have several benefits. Multi-agency participation during the early stages of the assessment process can broaden the scope of the survey to include questions that are meaningful to a wide variety of community organizations. Thus, the survey results, which are often broader than the individual agency's concerns, can be used to greater advantage. Furthermore, these other community agencies and organizations can provide approval and legitimization for the survey activity which may in turn encourage citizens to participate in the survey when they might have otherwise been reluctant.

Key informant, community forum, service utilization, social indicators, and citizen surveys are five approaches to need assessment. Generally, those techniques which are simplest in design and the least expensive to administer have the disadvantage of producing less valid results. Those which can give great accuracy in measurement often require a great deal of time, money, and training. Thus, one of the major decisions of the steering committee will be how to balance the time, money and personnel limitations with their desire to obtain the best and most valid information. The second major issue is how to foster community cooperation with the assessment process and

support of the assessment results. Some of the aforementioned approaches, the key informant and the community forum, in particular, lend themselves readily to attaining this goal as their basic structure involves citizenry input very early in the process. On the other hand, service utilization, social indicators, and citizen survey approaches require that data be analyzed and then presented to citizens or advisory boards for their input regarding implementation.

As this paper has attempted to show, each of the more commonly used assessment strategies has an implicit theoretical orientation toward the definition of need, utilizes different measuring instruments, varies in the degree of reliability and validity of the obtained measures, differs in the amount of technical expertise required to obtain the data, and varies as to the degree of interpretation necessary in order to plan and develop programs from the collected data.

REFERENCES

Beigel, A., Hunter, E. J., Tamerin, J. S., Chapin, E. H., & Lowery, M. J. Planning for the development of comprehensive community alcoholism services: I. The prevalance survey. American Journal of Psychiatry, 1974, 131, 1112-1115.

Bell, R. A. The use of a convergent assessment model for the determination of health status and assessment of need. In R. A. Bell, M. Sundel, J. Aponte & S. Murrell (Eds.), Need Assessment in Health and Human Services, Proceedings of the Louisville National Conference, March, 1976.

Bell, R. A., & Mellan, W. Southern health and family life studies. An assessment of needs: An epidemiologic survey. Vol. I. Florida Mental Health Evaluation Consortium, 1974. (Available from the first author, Health Sciences Center, P. O. Box 1055, School of Medicine, University of Louisville, Kentucky 40201.)

Bell, R. A., Nguyen, T., Warheit, G. J., & Buhl, J. M. Service Utilization, Social Indicators and Citizen Survey Approaches to Human Service Need Assessment. In C. C. Attkisson, W. A. Hargreaves, M. J. Horowitz, & J. E. Sorensen (Eds.), Evaluation of Human Service Programs. New York: Academic Press, 1977. (In press)

Bell, R. A., Sundel, M., Aponte, J., & Murrell, S. (Eds.). Assessing Health and Human Service Needs: Concepts, Methods and Applications. Accepted for publication, Human Sciences Press, 1978.

Bloom, B. L. Changing patterns of psychiatric care. New York: Behavioral Publications, 1975.

Blum, H. L. Planning for health: Development and application of social change theory. New York: Human Science Press, 1974.

Bodian, C., Gardner, E., Willis, E., & Bahn, A. Socioeconomic indicators from census tract data related to rates of mental illness. (Working Paper No. 17) Washington, D.C.: U. S. Department of Commerce, Bureau of the Census, September 5, 1965.

Gabbay, M., & Windle, C. Demographic data to improve services: A sampler of mental health applications. (MHDPS Working Paper No. 33) Rockville, Maryland: National Institute of Mental Health, 1975.

Goldsmith, H. F., Unger, E. L., Rosen, B. M., Shambaugh, J. P., & Windle, C. A typological approach to doing social area analysis. (DHEW Publication No. ADM 76-262) Rockville, Maryland: National Institute of Mental Health, 1975.

Grey, R. J., Warheit, G. J., & Schwab, J. J. An index of sociomedical well-being. A case study in assessing community health needs and services. Unpublished manuscript, 1973. (Available from the second author, Department of Psychiatry, School of Medicine, University of Florida, J. Hillis Miller Health Center, Box J-265, Gainesville, Florida 32610.)

Kosa, J., Alpert, J. J., & Haggerty, R. J. On the reliability of family health information. Social Science and Medicine, 1967, 1, 165-181.

Lapouse, R. Problems in studying the prevalence of psychiatric disorder. American Journal of Public Health, 1967, 57, 947-954.

Lemkau, P.V., Tietze, C., & Cooper, M. Mental hygiene problems in an urban district. Mental Hygiene, 1942, 26, 100-119.

MacMahon, B., Pugh, T. F., & Ipsen, J. Epidemiologic methods. Boston: Little, Brown, 1960.

Malzberg, B. Social and biological aspects of mental illness. Utica, New York: State Hospital Press, 1940.

Mechanic, D. Problems and prospects in psychiatric epidemiology. In E. Hare & J. K. Wind (Eds.), An international symposium on psychiatric epidemiology. London: Oxford University Press, 1970.

Moore, D. N., Bloom, B. L., Gaylin, S., Pepper, M., Pettus, C., Willis, E. M., & Bahn, A. K. Data utilization for local community mental health program development. Community Mental Health Journal, 1967, 3, 30-32.

Nguyen, T. D., Attkisson, C. C., & Bottino, M. J. Definition and identification of human service need in a community context. In R. A. Bell, M. Sundel, J. Aponte & S. Murrell (Eds.), Need Assessment in Health and Human Services, Prodeedings of the Louisville National Conference, March 1976.

Redick, R. W., Goldsmith, H. F., & Unger, E.L. 1970 census data used to indicate areas with different potentials for mental health and related problems. (DHEW

Publication No. HSM 72-9051) Rockville, Maryland: National Institute of Mental Health, 1971.

Rosen, B. M. A model for estimating mental health needs using 1970 census socioeconomic data. (DHEW Publication No. HSM 72-9051) Rockville, Maryland: National Institute of Mental Health, 1974.

Rosen, B. M., Lawrence, L., Goldsmith, H. F., Windle, C. D., & Schambaugh, J. P. Mental health demographic profile system description: Purpose, contents and sampler of uses. (DHEW Publication No. ADM 76-263) Rockville, Maryland: National Institute of Mental Health, 1975.

Schwab, J. J., Warheit, G. J., & Holzer, C. E. Mental health: Rural-urban comparisons. Paper presented at the Fourth International Congress of Social Psychiatry, Jerusalem, May 1972.

Schwab, J. J., & Warheit, G. J. Evaluating Southern mental health needs and services. Florida Medical Journal, 1973, 59, 17-20.

Schwab, J. J., Warheit, G. J., & Holzer, C. E. Suicidal ideation and behavior in a general population. Diseases of the Nervous System, 1972, 33, 745-748.

Van Dusen, R. A., & Zill, N. (Eds.) Basic background items for U.S. household surveys. New York: Social Science Research Council, 1975.

Warheit, G. J., Bell, R. A., Schwab, J. J. Planning for Change: Needs Assessment Approaches. Department of Psychiatry, University of Florida, and the Mental Health Services Branch, NIMH, 1974. To be published by the U.S. Government Printing Office, Summer 1977 (3rd edition).

Windle, C. D., Rosen, B. M., & Goldsmith, H. F. A demographic system for comparative assessment of needs for mental health services. In W. A. Hargreaves, C. C. Attkisson, & J. E. Sorensen (Eds.), Resource materials for community mental health program evaluation (2nd ed.). (DHEW Publication No. ADM 76-328) Rockville, Maryland: Alcohol, Drug Abuse, and Mental Health Administration, 1976.